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# **ESSP-3 Announcement of Opportunity, Step-Two**

## *Technical and Management Requirements*

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**Langley Research Center**

**ESSP AO Step-Two Kickoff Meeting**

**November 15, 2001**

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# ESSP-3 Technical & Management Requirements



- **Technical and management requirements are provided in the AO**
  - **Section 3.5 Technical Requirements**
  - **Section 3.7 Management Requirements**
  - **Appendix K**
    - **Table K-1 Proposal Page Count Limits**
    - **Table K-3 Compliance Table**
    - **Section G Technical Implementation**
    - **Section H Management**
  - **Earth Explorers Program Mission Assurance Guidelines and Requirements**
  - **Earth Explorers Program Flight and Ground Safety Requirements**
    - **Includes orbital debris assessment**
  - **Must read ESSP-3 AO website for Q&A's and updates**
    - <http://www.earth.nasa.gov/>, Research Opportunities, or <http://essp.larc.nasa.gov/essp>
- **Requirements are different for Step-One and Step-Two**
  - **Step-Two asks for more detail and more information**
  - **Step-Two-- Technical page limit 50 pages; Management page limit 25 pages**
- **A full Technical, Management and Cost evaluation will be conducted in Step-Two**
  - **Analytical design tools will be used**
  - **Two independent cost assessments will be conducted**



# ESSP-3 Technical Requirement Highlights



- **All technical aspects of the proposed investigation must be included from concept definition through mission operations and data analysis, archival, and dissemination**

<b>Mission Formulation</b>	<b>Phase 1</b>	<b>Mission Concept Studies</b>
	<b>Phase 2</b>	<b>Mission Definition &amp; Preliminary Design</b>
<b>Mission Implementation</b>	<b>Phase 3</b>	<b>Mission Detailed Design</b>
	<b>Phase 4</b>	<b>Mission Develop. and Launch</b>
	<b>Phase 5</b>	<b>Mission Operations and Data Analysis, Archival, and Dissemination</b>

- **Committed to infusing new technologies that lower mission costs**
- **Significant technology development will be difficult because of short ESSP development time**
  - **Any required new technology, technology development or technology enhancement must be identified along with a discussion of risk and risk mitigation approaches**



# ESSP-3 Technical Requirement Highlights (concluded)



- **Step-Two proposals at minimum shall cover the following item(s)\***
  - **Mission Design and Table K-5**
  - **Instrument Implementation**
  - **Instrumentation Interface and Payload Integration**
  - **Spacecraft, Spacecraft Technical Maturity Matrix (L-2b), Table K-6**
  - **Launch Service and Table K-7**
  - **Manufacturing, Integration and Test**
  - **Mission Operations, Ground and Data System and Table K-8**
  - **Plans to Resolve Open Technical Implementation Issues**

**\*Note- Must be within the constraints of the page limits**

**DON'T FORGET:** Table K-3 - Compliance Table, Changes to Appendix K Tables, Technical Maturity Matrices, WBS, International Agreements, Signed Letter of Endorsements, Descope Plans



# ESSP-3 Management Requirement Highlights



- **NASA will maintain oversight and reporting requirements at a level that will ensure mission success and agreed-upon science return in compliance with committed cost, schedule, performance, quality, reliability and safety requirements**
- **ESSP missions shall have the following**
  - **Product Assurance Program**
  - **Safety Plan**
- **Required system level reviews (10) that must be in mission schedule**

<b>Systems Requirements Review</b>	<b>Preliminary Design Review</b>
<b>Mission Design Review</b>	<b>Confirmation Readiness Review</b>
<b>Mission Confirmation Review</b>	<b>Critical Design Review</b>
<b>Pre-Environmental Review</b>	<b>Pre-Ship/Operational Readiness Review</b>
<b>Mission Readiness Review</b>	<b>Flight Readiness Review</b>
- **Principal Investigator (PI)-Mode missions**
  - **PI totally responsible for mission including science/applications integrity**
  - **Project Manager reports directly to PI**
  - **Other key individuals include systems engineer and co-investigators**
  - **ALL participants shall have identified roles and be included in the funding profiles**



# ESSP-3 Management Requirement Highlights (concluded)



- **Step-Two proposals at minimum shall cover the following item(s)\***
  - **Management Processes and Plans**
  - **Schedule**
  - **Team Organization, Structure, and Experience**
  - **Risk Management**
  - **Mission Assurance and Safety**
  - **Facilities and Equipment**
  - **Plans to Resolve Open Management Issues**
  - **Site visit location**

**\*Note- Must be within the constraints of the page limits**

**DON'T FORGET:** Table K-3 - Compliance Table, Show Critical Path on Schedule, Show Schedule Reserves on Schedule, Show ALL Reviews on Schedule, Orbital Debris Assessment, Resumes that shows experience required of personnel, Funding for All Investigators, Relevant Experience and Past Performance Appendix



# Site Visits



- **Will emphasize technical aspects of mission**
- **Site Visits April 22 - May 17, 2002**
- **Coordinated by Chuck Williams and Marvalyn Sweeney**
- **If evaluation panels have a significant question, the PI will receive the written questions three days prior to site visit**
- **Questions should be addressed during site visit**



# Final Comment



- **READ/STUDY AO** and provide ALL information requested
  - There are reasons for requesting information that may not make sense to you but does to the evaluators
- Use the suggested proposal outline in Appendix K
- Be explicit in addressing comments provided in Selection Letters
- Try to put yourself in the place of an evaluator trying to evaluate your proposal and make it as easy for the evaluator as possible to find and use the information you provide in the proposal
- Questions after Kickoff Meeting
  - Do not call me with questions after this Kickoff Meeting-- I can not answer them
  - Use ESSP AO Questions website at <http://essp.larc.nasa.gov/essp>
  - Questions will be answered on a time available basis
  - Answers will be posted to ESSP AO website